LISTING OF THE CLAIMS:

This following is a listing of pending claims (none of which are amended by this document):

1. (Previously Presented) A method for enhancing the measuring accuracy in an antenna array comprising a number of antenna elements, the method comprising;

a) -receiving analog signals on all antenna elements of the antenna array at a first time t_1;

- producing first values for a first radiation diagram from values in the signals from the first time t_1, and;

-finding a maximum point for the first values,

b) - switching off or reducing the signal from one interadjacent antenna element at a second time (t_2);

-receiving analog signals on all antenna elements except from the one switched off or reduced antenna element, and;

- producing second values for a second radiation diagram from values in the signals from the second time (t_2);

c)-using the first values to calculate a first range referring to the second radiation diagram, outside which the first range grating lobes will appear in the second radiation diagram;

-rejecting all values outside the first range, and;

-finding a maximum point for the second values.

2. (Previously Presented) The method according to claim 1, further comprising repeating act b) and act c) whereby an antenna configuration is dynamically altered such that interadjacent antenna elements are switched off or reduced until only the outermost antenna elements remain.

3. (Previously Presented) The method according to claim 1, wherein the act of finding the maximum point for the values comprises calculating at which angle (θ_{max}) the maximum point for the main lobe appears in a radiation diagram.

4. (Previously Presented) The method according to claim 1, further comprising converting the analog signals to digital signals by sampling.

5. (Previously Presented) The method according to claim 1, further comprising producing a radiation diagram from the values.

6. (Previously Presented) The method according to claim 1, wherein the antenna elements have a relative distance such that no grating lobes occur when using all elements in a full array.

7. (Previously Presented) An antenna array system comprising:

an antenna array comprising a number of antenna elements;

means for receiving analog signals with the antenna array elements, and;

means for producing values for a radiation diagram from the signals,

a) means for receiving analog signals on all antenna elements of the antenna array at a first time (t_1);

means for producing first values for a first radiation diagram from values in the signals from the first time (t_1), and;

 means for finding a maximum point for the first values,

 b) means for switching off or reducing the signal from one interadjacent antenna element at a second time (t_2);

 means for receiving analog signals on all antenna elements except from the one switched off or reduced antenna element, and;

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means for producing second values for a second radiation diagram from values in the signals from the second time (t_2);

c) means for using the first values to calculate a first range referring to the second radiation diagram, outside which first range grating lobes appear in the second radiation diagram;

means for rejecting all values outside the first range, and;

means for finding a maximum point for the second values.

8. (Previously Presented) An antenna array system according to claim 7, further comprising means for repeating act b) and act c) whereby that an antenna configuration is dynamically altered such that interadjacent antenna elements are switched off or reduced until only the outermost antenna elements remain.

9. (Previously Presented) An antenna array system according to claim 7, further comprising means for finding the maximum point for the values comprises means for calculating at what angle (θ_{max}) the maximum point for the main lobe appears in a radiation diagram.

10. (Previously Presented) An antenna array system according to claim 7, further comprising means for converting the analog signals to digital signals by sampling.

11. (Previously Presented) An antenna array system according to claim 7, further comprising means for producing a radiation diagram from the values.

12. (Previously Presented) An antenna array system according to claim 7, wherein the antenna elements have a relative distance such that no grating lobes (7) will occur when using all elements in a full array.

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13. (Previously Presented) A computer program product comprising instructions stored on a storage medium which, when executed, perform the acts of:

receiving analog signals on all antenna elements of an antenna array at a first time t_1;

producing first values for a first radiation diagram from values in the signals from the first time t_1;

finding a maximum point for the first values,

switching off or reducing the signal from one interadjacent antenna element at a second time (t_2);

receiving analog signals on all antenna elements except from the one switched off or reduced antenna element;

producing second values for a second radiation diagram from values in the signals from the second time (t_2);

using the first values to calculate a first range referring to the second radiation diagram, outside which the first range grating lobes will appear in the second radiation diagram;

rejecting all values outside the first range, and;

finding a maximum point for the second values.